

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional)  13580/1									
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	First Named Inventor  Roger PAYASSIS										
	Art Unit  3752		Examiner  David D. HWU								
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table style="width: 100%; border: none;"><tr><td style="width: 50%; vertical-align: top; padding: 5px;"><input type="checkbox"/> applicant/inventor.</td><td style="width: 50%; vertical-align: top; padding: 5px; text-align: right;">/Daniel G. Shanley/ _____ Signature</td></tr><tr><td style="vertical-align: top; padding: 5px;"><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td style="vertical-align: top; padding: 5px; text-align: right;">Daniel G. Shanley _____ Typed or printed name</td></tr><tr><td style="vertical-align: top; padding: 5px;"><input checked="" type="checkbox"/> attorney or agent of record. Registration number 54,863</td><td style="vertical-align: top; padding: 5px; text-align: right;">202-220-4200 _____ Telephone number</td></tr><tr><td style="vertical-align: top; padding: 5px;"><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</td><td style="vertical-align: top; padding: 5px; text-align: right;">March 30, 2009 _____ Date</td></tr></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>				<input type="checkbox"/> applicant/inventor.	/Daniel G. Shanley/ _____ Signature	<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	Daniel G. Shanley _____ Typed or printed name	<input checked="" type="checkbox"/> attorney or agent of record. Registration number 54,863	202-220-4200 _____ Telephone number	<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____	March 30, 2009 _____ Date
<input type="checkbox"/> applicant/inventor.	/Daniel G. Shanley/ _____ Signature										
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<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____	March 30, 2009 _____ Date										
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Roger PAYASSIS Confirmation No.: 7197  
Appln. No. : 10/566,587  
Filed : January 31, 2006  
For : FIRE FIGHTING HELICOPTER  
Art Unit : 3752  
Examiner : Davis D. Hwu

Mail Stop Amendment  
Commissioner of Patent  
P.O. Box 1450  
Alexandria, VA 22312-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Applicants respectfully request pre-appeal brief review of the rejections in this application. Claims 4 – 8 are pending in the present application. Claim 4 is independent. Claims 1 – 3 were previously canceled. Claims 4 and 6 – 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,580,339 (“Nance”) in view of U.S. Patent No. 6,439,480 (“Velde”). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nance in view of Velde and further in view of U.S. Patent No. 6,622,966 (“McConnell”).

**I. Applicant’s Invention as Claimed in Claim 4**

Helicopters and other flying devices have been used to combat fires in remote areas. Typical prior art devices used large buckets of water that would hang from underneath the helicopter. Once the helicopter reached the location of the fire, the operator would dump the bucket’s contents. In dumping such a large amount of liquid at one time, the center of gravity of the helicopter would shift significantly. This in turn would cause notable instability during flight. Later devices that used reservoirs located inside the body of the helicopter had similar problems.

The present invention arose from a recognition of this instability problem. In order to solve this, the Applicant designed a helicopter having a reservoir that contains fire fighting liquid and includes a movable “restriction plate.” The restriction plate moves up or down with the level of liquid in the reservoir, thus reducing or increasing the volume of the reservoir as needed. This

in turn restricts the movement of the fire fighting liquid's center of gravity, and increases stability of the helicopter while it dispenses liquid.

Claim 4 is illustrative of this invention:

A fire fighting helicopter, comprising:  
a fuselage, the fuselage comprising:  
at least one reservoir for the storage of fire fighting liquid under pressure for the extinguishing of fire;  
a launcher, connected to the reservoir, wherein the launcher dispenses the fire fighting liquid and controls the quantity of the fire fighting liquid dispensed;  
a restriction plate creating a leak-tight seal and being vertically mobile between stable guides within the reservoir such that the restriction plate decreases or increases the total volume available to be occupied by the fire fighting liquid in the reservoir;  
an electric motor attached to the restriction plate controlling the rise and fall of the restriction plate,  
wherein the movement of the restriction plate acts to restrict the movement of the fire fighting liquid's center of gravity.

## **II. The Rejection Based on Nance and Velde**

Applicants respectfully submit that the proposed combination of Nance and Velde does not render claims 4, 6, 7, and 8 of the present invention obvious for at least the following three reasons. First, Velde is non-analogous prior art because Velde is directed to a device for the automatic application of spray paint, while Nance is directed to a helicopter for fighting fires. Second, there is no motivation to combine Nance and Velde because the helicopter of Nance does not have the instability problem mentioned above and thus has no need for the displaceable wall of Velde. Finally, the displaceable wall of Velde serves a substantially different function than the restriction plate of the present invention and thus does not teach one of ordinary skill in the art that a movable plate can solve stability problems in a fire fighting helicopter.

### **A. Velde Is Non-Analogous Art.**

The Examiner has claimed that the teachings of Velde combined with Nance render claim 4 of the present invention obvious. A reference must be analogous art in order to form the basis for an obviousness rejection. M.P.E.P. § 2141.01(a). In order to be analogous, the reference must be reasonably pertinent or within the inventor's field of endeavor in order to be used in an obviousness rejection. *Id.*

While the present application is directed to a helicopter used in fighting fires, Velde is directed to a paint spraying device that uses a syringe-like apparatus to dispense paint. The field of automatic spray painting is a field that is unrelated to the field of fighting fires in remote

areas. Simply showing the use of a motorized plate in a totally different field would not lead a person of ordinary skill in the art to devise the restriction plate as claimed in the present invention. Furthermore, a person of ordinary skill in designing devices for fighting fires would not logically look to the field of automatic spray painting for a solution to the problem of maintaining a static center of gravity in a liquid-filled reservoir. Indeed, nothing in Velde suggests that the syringe-like apparatus would have any effect on the center of gravity of the paint in the container such that the device as a whole would be stabilized. Furthermore, this solution would not have been obvious to one of ordinary skill. That an inventor seeking to find a solution for restricting the movement of the center of gravity in a reservoir would have looked to the field of spray painting for inspiration is illogical and unreasonable. Thus, Velde is not reasonably pertinent or within the Applicant's field of endeavor.

Accordingly, the Applicant respectfully submits that Velde is non-analogous art and may not be used in the obviousness rejection as alleged. Because Velde relates to different technical arts having different objectives for different problems, this reference should not be used to modify the base references as alleged in the obviousness rejection.

Further, none of the other references (e.g., McConnell) addresses the deficiencies of Nance. For example, McConnell describes a fire fighting helicopter having a holding container and a weighted plate for keeping the fluid in the holding container level. This is in contrast to a helicopter in accordance with claim 4 of the present invention, in which a restriction plate creates a leak-tight seal in the reservoir and in which the restriction plate is moved by a motor. These limitations are not found in McConnell or Nance.

**B. There Is No Motivation to Combine Nance and Velde Because the Helicopter of Nance Does Not Have an Instability Problem and Has No Need for the Displaceable Wall of Velde.**

The Examiner has claimed that the combination of Nance and Velde teaches a helicopter in accordance with claim 4 of the present invention. The Nance reference teaches a helicopter that emits clouds of "flame-smothering vapors" to combat fires. (Nance at Abstract.) These vapors may be foam, mist, or other light chemicals. (Nance at col. 1 ll. 36 – 40.) Because the Nance device is designed to use vapors and other light chemicals in its reservoir, the center of gravity will not change significantly as the vapors are dispensed. Accordingly, Nance does not have the stability problem associated with certain helicopters that dispense heavier chemicals.

In contrast, the helicopter of claim 4 of the present invention emits a fire fighting liquid, which will necessarily be much denser than the vapors used in Nance. As the heavy liquid in the reservoir shifts around during dispensing and flight, the center of gravity of the liquid in the reservoir will shift. This shifting of the center of gravity gives rise to a stability issue.

While a helicopter in accordance with claim 4 of the present invention has a stability issue and, for this reason, has a need for a restriction plate, Nance does not have the stability problem and therefore has no need for a restriction plate or similar device. Accordingly, Nance's helicopter has no need for Velde's displaceable wall, and there is no motivation to combine Velde with Nance.

Further, the Examiner has not provided a rationale behind combining Velde with Nance. As discussed in *KSR Int'l Co. v. Teleflex, et al.*, No. 04-1350, (U.S. Apr. 30, 2007), it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to combine alleged prior art elements in the manner as claimed by the Applicant. Obviousness cannot be sustained on mere conclusory statements.

**C. Velde's Displaceable Wall Serves a Substantially Different Function Than the Restriction Plate of the Present Invention.**

The Examiner has claimed that Velde teaches the restriction plate/restricting center of gravity limitation of claim 4 of the present invention. Velde describes "a device for automatic spray application of paint." (Velde at [54].) The device includes a "dosing apparatus [that] regulates the compression of an external surface against the inner volume of the paint container and thereby forces paint out of the container." (Velde at Abstract.) This apparatus, best seen in FIG. 2 of Velde, functions much like a syringe, forcing paint in the container through a vertical nozzle at the container's far end. In this way, paint is pressed out of the nozzle. Thus, the primary purpose of this apparatus is to "provide[] a very exact and reliable dosing of the paint" (*id.* at col. 2, ll. 21- 22), rather than to stabilize the device during use.

In contrast, the restriction plate of the helicopter of the present invention decreases or increases the total volume of the fire fighting liquid reservoir to avoid instability during flight. This change in volume restricts the movement of the fire fighting liquid inside the reservoir, thereby reducing shifts in the liquid's center of gravity. This in turn helps to stabilize the helicopter during flight.

Rather than rely on a moveable plate to force liquid out of a container, as in Velde, the helicopter as recited in claim 4 of the present invention uses a launcher to draw the fire fighting

liquid from the reservoir. Thus, the helicopter recited in claim 4 of the present invention does not depend on the restriction plate to draw liquid out of the reservoir unlike the syringe-like apparatus of Velde, which relies on a movable plate to force paint out of a container.

Velde does not describe a device that uses the movement of a plate to control the center of gravity of a high-pressure liquid. Rather, Velde merely discloses a means for forcing paint out of a container in a way nearly identical to a syringe. Nothing in Velde even suggests that a movable plate may be used to control stability of a helicopter by restricting the center of gravity of the liquid inside a reservoir within the helicopter. This use would not have been obvious to one of ordinary skill.

### **III. Conclusion**

For the foregoing reasons, the Applicant respectfully requests pre-appeal brief review of this application and reconsideration of the rejections. Prompt consideration and allowance of the pending claims is respectfully requested. The Commissioner is hereby authorized to charge any fees and credit any overpayments associated with this filing to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,

Dated: March 30, 2009

By: /Daniel G. Shanley/  
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